
TRANSITION:
a process of beginning and ending
by Kimberly Peck

TRANSITION

a process of beginning and ending

by Kimberly Peck

A thesis submitted to the faculty of Virginia Polytechnic Institute and State University in partial fulfillment of the requirements for the degree of **Master of Architecture**

approved by:

_____

Mitzi Vernon, chairman

_____

Robert J. Dunay

_____

Pia Sarpaneva

Blacksburg, VA
April, 1997

special thanks to:

my committee for their guidance

Buddy for tireless help in the shop

my parents for their love and support

preface

Studying the interaction of people with the objects around them is essential to designers. A designer must study in detail: the hold, the fit in the hand, the effect of movement, the placement, and the juxtaposition and relation of objects to one another. Insight derived from such investigation determines the form given to an object. However, the answer is not a static or rote response to function. The designer searches to balance meaning with practicality, while simultaneously pushing the boundaries of perception to make people reconsider how and why objects exist. Questions of changing social customs, habits, rituals and traditions are explored. The resulting form reflects the manner in which the object is used. Shape is given to ritual. The intent is for design to reflect the order of day to day existence. It is not important whether an object is a recognizable form or whether it looks like its predecessors. However, upon consideration one should realize the form is correct. The object possesses meaning; it is appropriate for its time. The process is on-going, requiring the designer to continually re-evaluate and re-define the human condition by assessing the world we make and how we exist within it. One pursues better ways to facilitate daily life, never becoming complacent with existing products. More acutely, it is requisite for the designer to maintain an ongoing dialogue with their work- an empirical process of evaluating and analyzing past objects in order to make the decisions that allow the beginning of the next.

Good design depends on the harmony established between the form of an object and its use.

-Max Bill

TRANSITION

This thesis lies in the **act** of **ending** one
product and **beginning** the next

ANALYSIS

Is the form appropriate?

knowledge

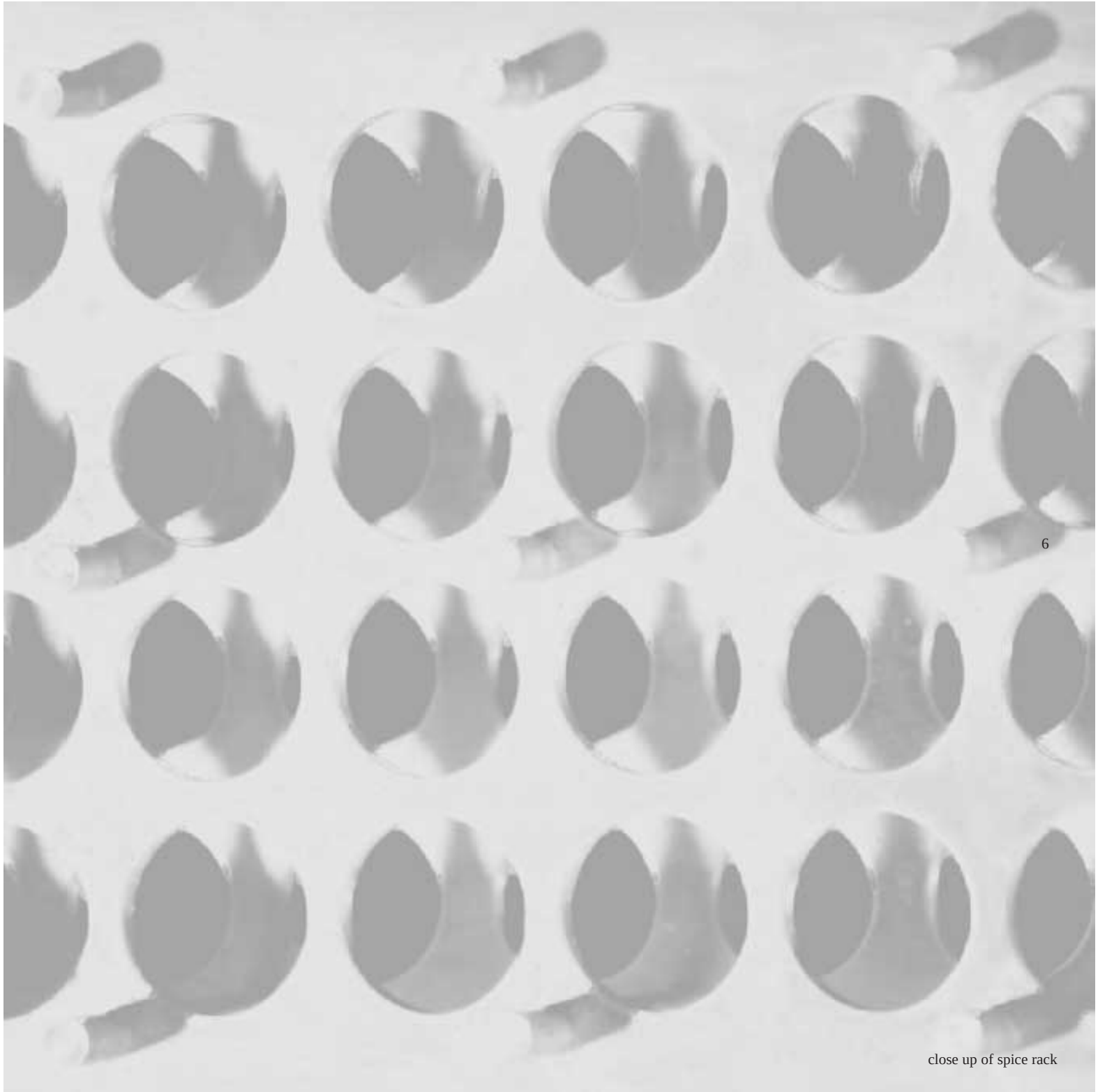
Learn from **tools**, learn from **practice**, learn from **mistakes**, learn from **comparison**

QUESTION

does the object have meaning in our everyday life

honesty

Is the object **strong** or **weak?**



close up of spice rack

spice rack

desire
a field of spices floating over the table

realization
a grid of glass tubes between two floating aluminum plates

a secondary grid of aluminum pins is juxtaposed against the primary field of glass tubes

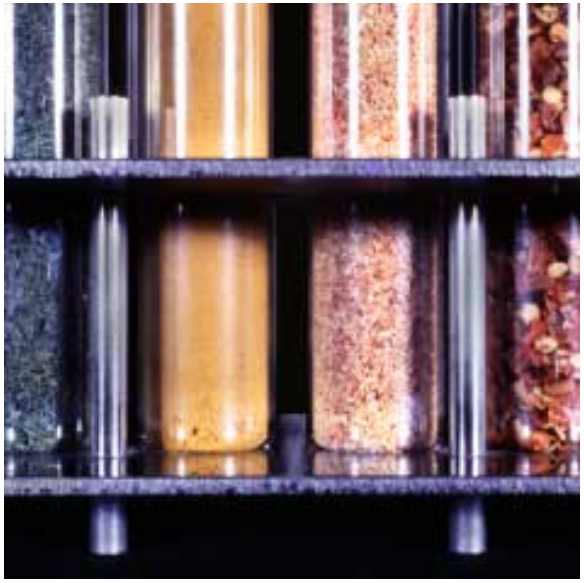
aluminum pins separate the two plates forming two parallel planes between which the spices are visible

laboratory glass is used for its consistency, transparency, and neutrality

effect
strong order created by vertical repetition

rich field of color and texture is framed between the two plates

presentation of color and texture are accessible both visually and physically on the table



details of spice rack

what works?

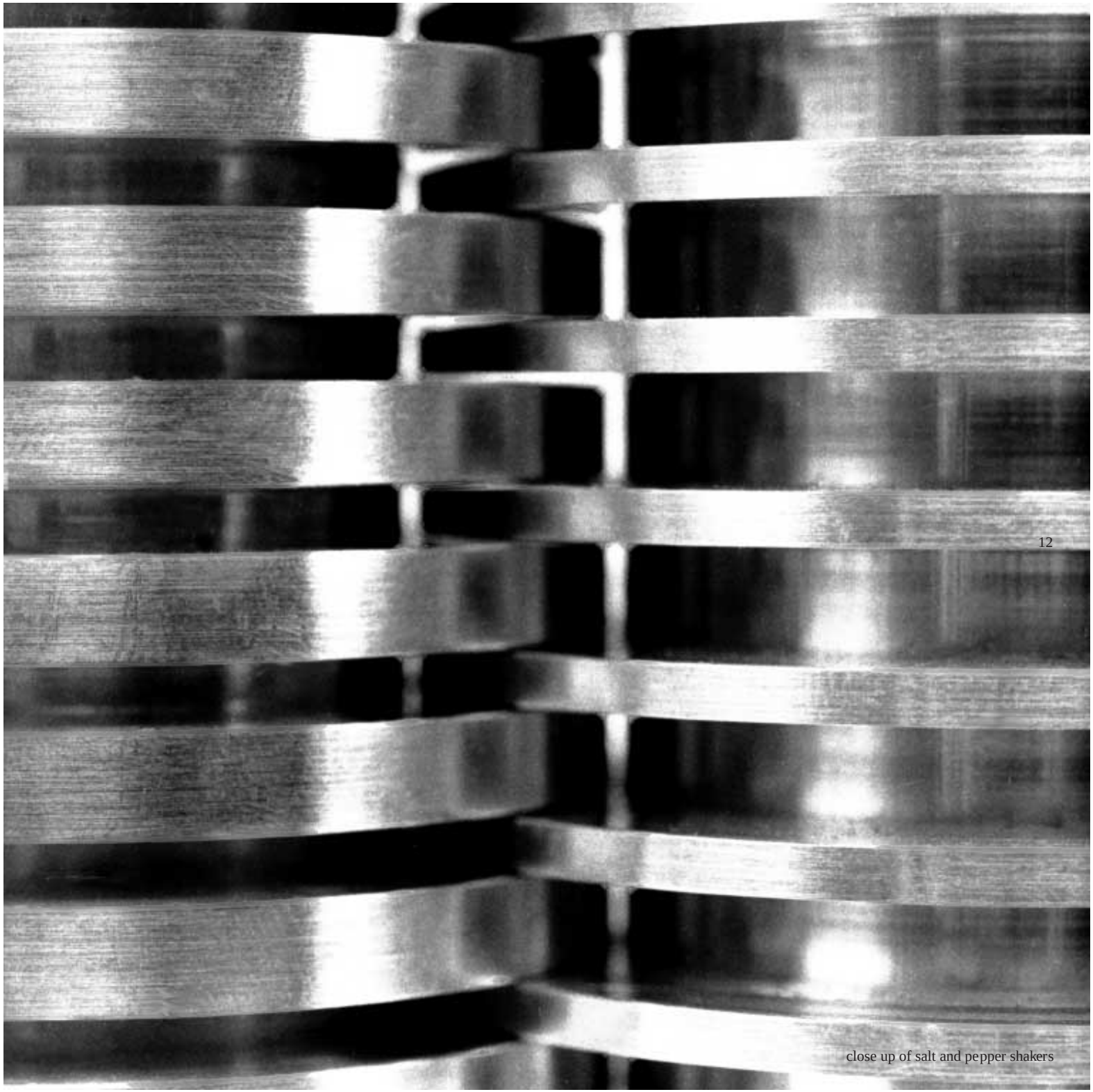
revealing **order** and **rhythm**
through **repetition**

knowledge of MATERIAL-
milling ALUMINUM

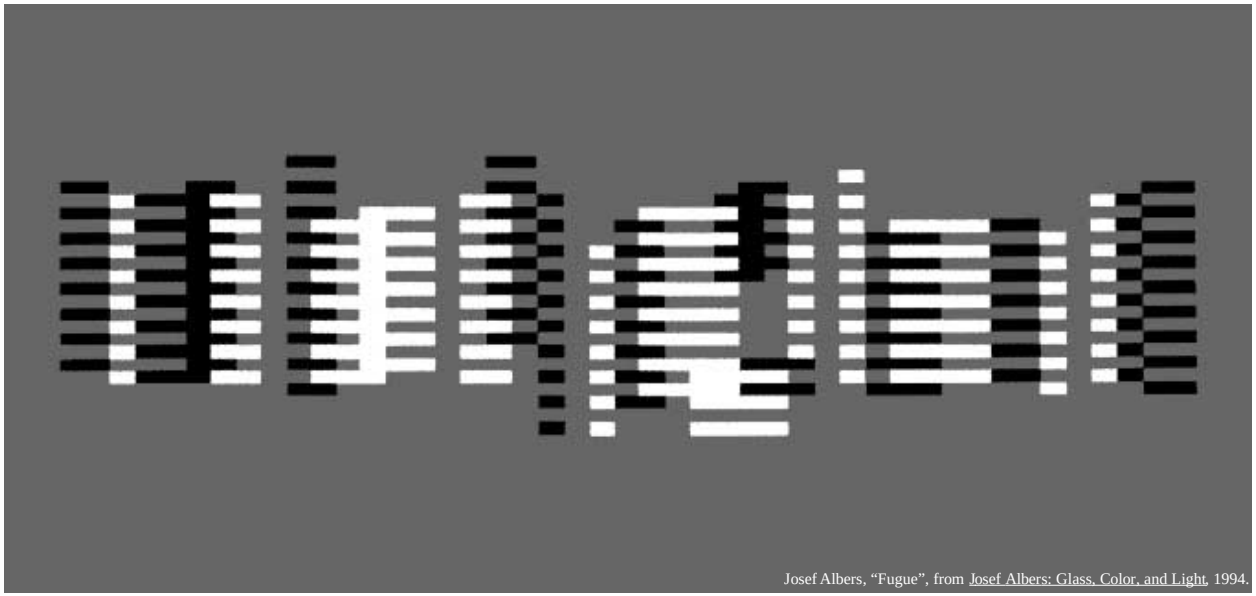
pursuit of objects for the *table*

please pass the salt

Objects placed on the table interact with one another and their users to form the table landscape. Social habits, customs, and traditions affect the way this landscape is perceived. The ritual of dinner can be powerful in its influence, motivating the form an object will take. For example, because manners dictate that we pass the salt with the pepper and because of there frequent common usage; salt and pepper are seen as a pair and are placed together on the table. The design of these salt and pepper vessels facilitates this act by allowing the two objects to be joined physically on the table and in the hand.



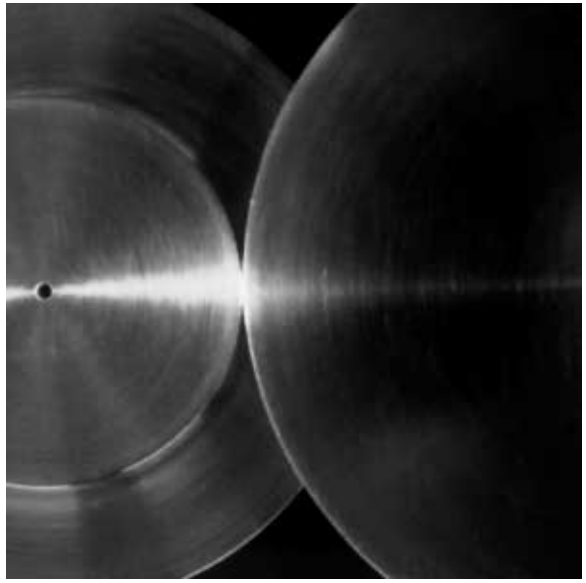
close up of salt and pepper shakers



Josef Albers, “Fugue”, from Josef Albers: Glass, Color, and Light, 1994.

The salt and pepper shakers use repetition of bands to join two different elements in manner similar to Josef Alber’s painting.

The joining of the salt and pepper vessels occurs in such a way that they form a third distinct object. This object takes on a life, an appeal, a purposiveness of its own. The interlocking is articulated by the subtraction of rings of material from cylinders to form a series of parallel planes. Evidence of the lathe in the making of these objects is apparent. One can visualize the action of a tool removing a ring of material as the cylinder spins. The width of the bands of material remaining in relation to the width of the rings of material removed comprises a ratio of two-to-one for the pepper and the inverse, one-to-two, for the salt. This inverse relationship, along with the choice of cylinders of two different diameters, makes apparent the distinction between the salt and the pepper.



details of salt and pepper shakers

A later iteration of the salt and pepper shakers experimented with proportion, size, and material. This final version was made of stainless steel and the size was refined so that both containers when interlocked easily fit into the hand. The smaller diameter allowed the movement of the threaded opening from the bottom to the top. Having the opening on the top eliminated refilling spillage inherent in most salt and pepper shakers. The openings are now completely invisible, they are accessed by turning the top ring of each vessel.

experience
use of the lathe

physical **joining** of objects mentally paired

WHAT'S GOOD ?
ringed ***cylinder's*** affinity with ***hand***

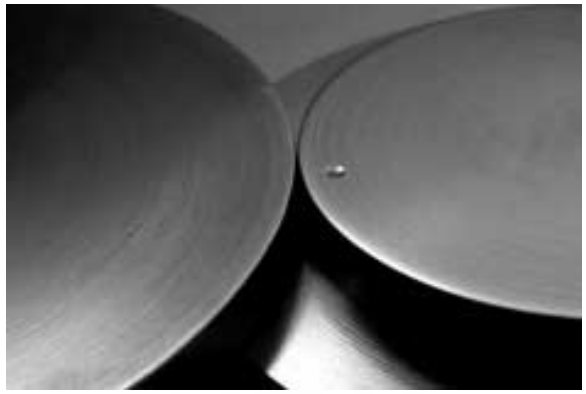
form

minimal removal of material from pure geometry to achieve interlocking

investigate objects with different **functions** but similar forms

cream and sugar vessels

Cultural influence on an object's form can also be seen as a result of the ritual of coffee consumption. The frequent use of both cream and sugar incites their identification as a singular entity. This cultural suggestion manifests itself physically in the design of the vessels for cream and sugar. The articulation of the containers occurs in such a way that they interlock similar to the salt and pepper shakers, achieving a new existence on the table as one object. The articulation of the cream and sugar vessels differs from that of the salt and pepper in that manipulations of the pure geometry are concurrent with the introduction of an aspect of function-the spout for pouring cream and the slot for a spoon. Again the functions are facilitated by the use of the parallel planes; both the spout and the slot as well as the lids of the two vessels exist as an articulation of these planes. As with the salt and pepper shakers the differing widths of the bands of material distinguishes one vessel from the other. However in the case of the creamer and sugar this distinction is particularly appropriate due to the vessels divergent functions. The wider bands on the creamer, along with its smaller diameter, make it more secure in the hand and thus more fitting to the purpose of pouring than the larger sugar which tends to remain on the table.



details of cream and sugar vessels

evolve

rings motivated by
function not **esthetics**

CHANGE bands from interlocking
to controlling **grip**

what works ? different widths for
different intents

repetition of bands used
as **instrument** to aid **hand** with **movement**

separate **functions** applied
to **individual** bands

The design of the peppermill resulted from the articulation of the sensation of holding the salt and pepper vessels in the hand. The repetitive nature of the rings when paired with the reflective quality of the milled surface give the object a visual rhythm imparting an aspect of motion. This phenomenon elicits the desire to twist or rotate the object. The peppermill takes advantage of this desire, giving the twisting action the function of grinding peppercorns. This object has the same subtraction of rings from a cylindrical form to create a series of parallel planes; however the peppermill does not join with another object. Instead each component of the mill is articulated in a different manner to make clear its distinction. This is accomplished in the same manner as the other objects, by varying the width of the bands of material removed. The base of the peppermill is more secure to hold because the bands of material removed are narrow leaving a larger surface area in contact with the hand. This is appropriate in that the function of grinding is accomplished by stabilizing the bottom with one hand while rotating the top of the mill with the other hand. The more widely spaced bands at the top of the mill separate it from the bottom both visually and tactually; recognizing its different function as a tool. The mill is further differentiated by a wide void subtracted between the top and bottom cylinders to denote their division and by a narrow band at the bottom signifying where the ground pepper is released. The topmost ring is of a smaller diameter in order to further separate it. The degree to which this ring is tightened controls the coarseness of the pepper. Completely loosening the ring allows for the top to be removed entirely and the vessel to be refilled.

details of peppermill

re-evaluate use of laboratory **glass**
contained in **aluminum**

WHAT'S GOOD
repeating bands as surface
in contact with **hand**

physical *joining* of objects used together

explore

geometry of the shape of the glass vessel juxtaposed with the aluminum rings

pursue- **glass to** contain; **aluminum for**
contact with hand **and** table

close up of first oil and vinegar cruets

Analysis of the geometries created where the sphere at the base of the glassware penetrates the aluminum rings.

Oil and vinegar represent another pair of objects which are linked conceptually due to their use together at the table. The design acknowledges this by using the same idea of joining as the salt and pepper shakers. However, new issues of materiality are introduced. The objects are no longer of a singular material. Like the spice rack, a designed aluminum container houses standard laboratory glassware. The oil and vinegar containers are not solid aluminum cylinders, rather each is composed of equidistantly separated parallel rings of the same outside diameter in which a glass flask rests. The flask creates a spherical void that is visible between the rings. The width of the rings on one object is the same as the width of the separation between the rings on the other object, allowing them to interlock. The need to connect the rings to one another presented an opportunity to design the support of the containers. Four equidistant pins penetrate all the disks, separating them and protruding at the top and bottom to make contact with the table. Therefore, as with the spice rack it is the designed container which houses the standard glassware and which comes in contact with the table. However, in these vessels the aluminum serves not only to contain the glass but also to receive the hand; the glass is removed from ones grip and serves only to contain the liquids. When the glass flask is filled, the liquid is visible between and is reflected off the aluminum rings. The differing colors and properties of the oil and vinegar are made obvious when framed between the parallel planes. The series of stacked rings are juxtaposed with the level of liquid contained within the flask. This level changes position between the bands as the cruets are filled and emptied introducing an aspect of measure to the design.

evaluation awkward to hold

what works?

geometry created when glass penetrates aluminum

rethink

can’t remove glass to clean

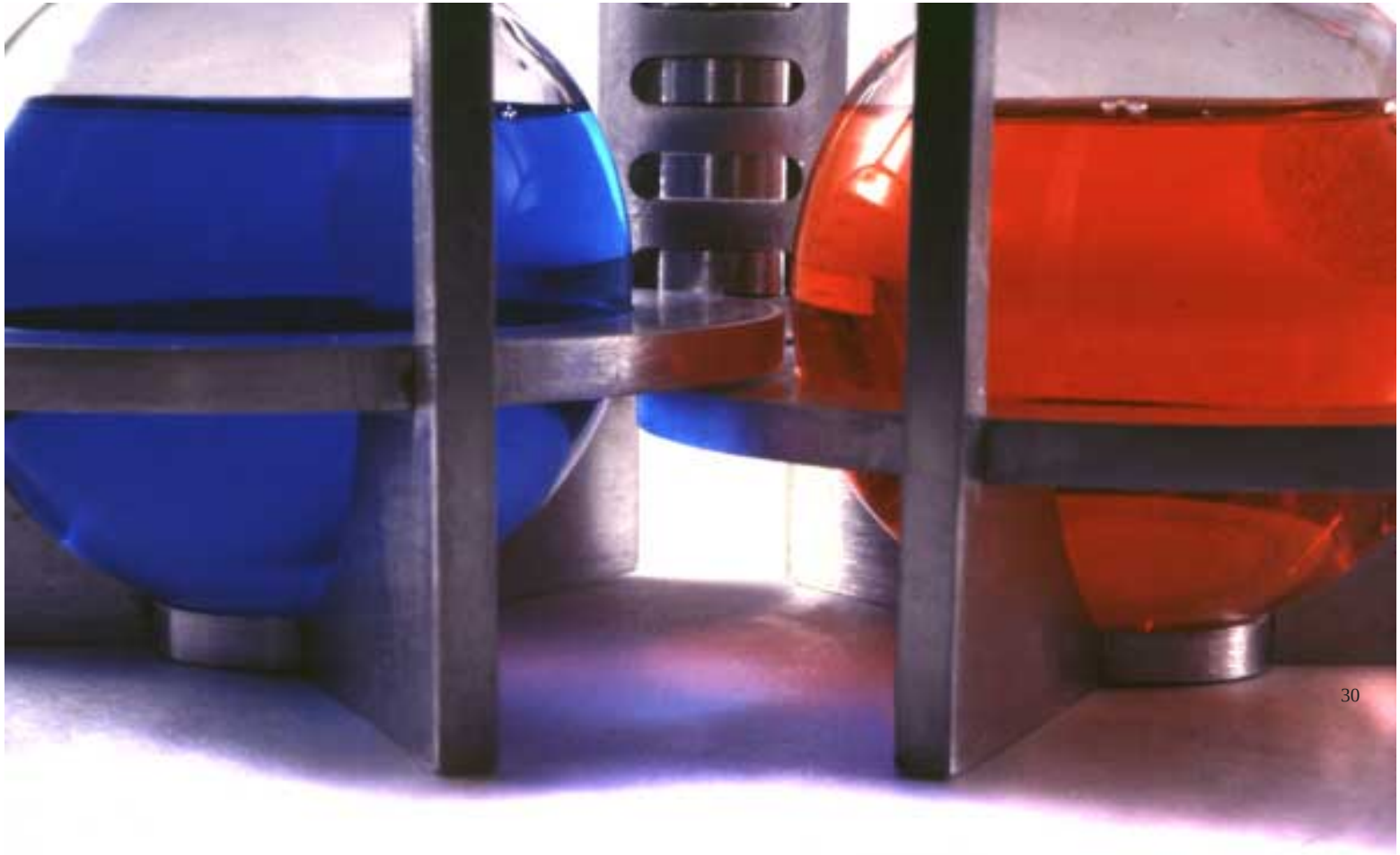
GOAL to have interlocking

occur only where needed

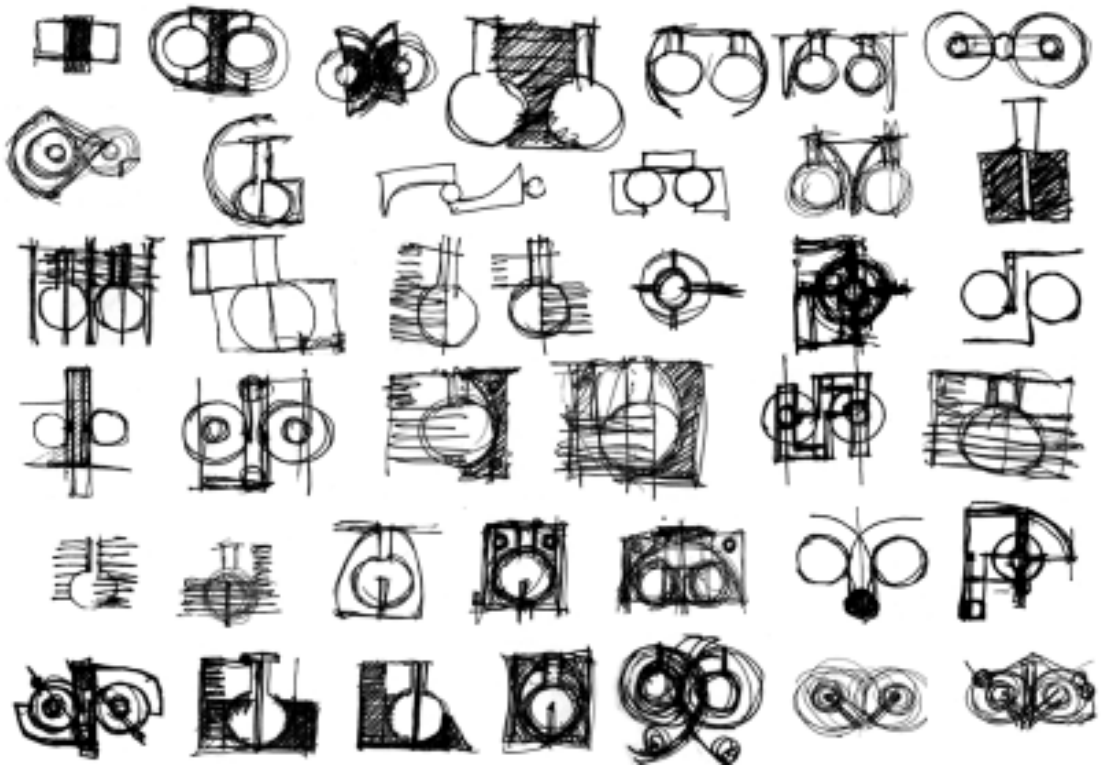
every component has a purpose

desire

to pour **both** vessels at **once**

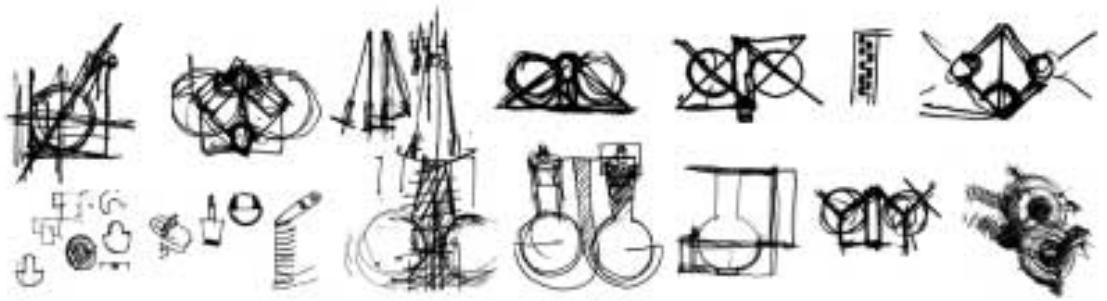


close up of second oil and vinegar cruets

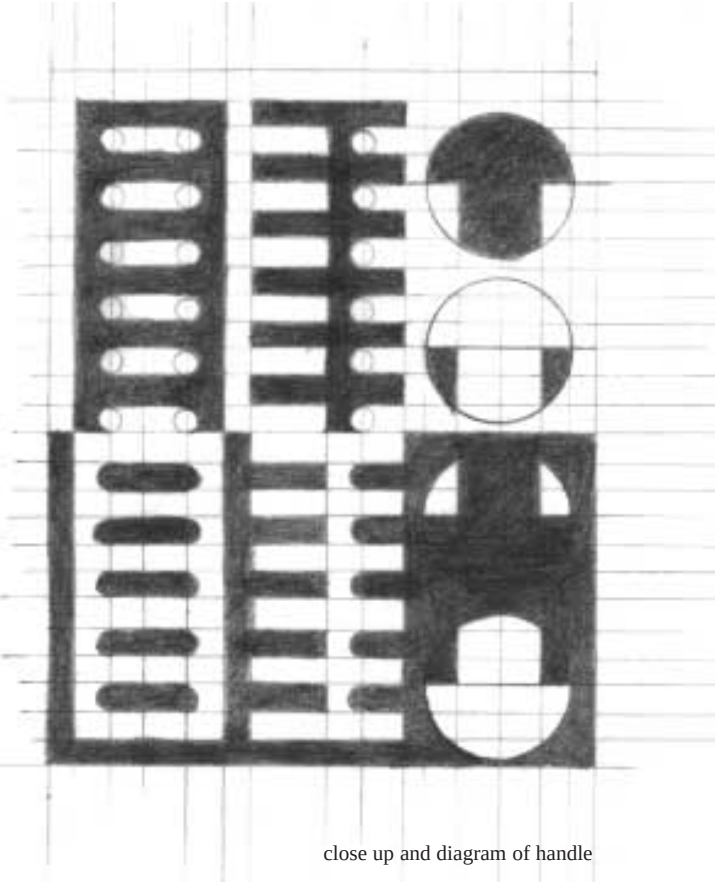


In any product you'll find a tiny instance of peace and then a slowly eroding doubt about its construction and the longing for the next one.

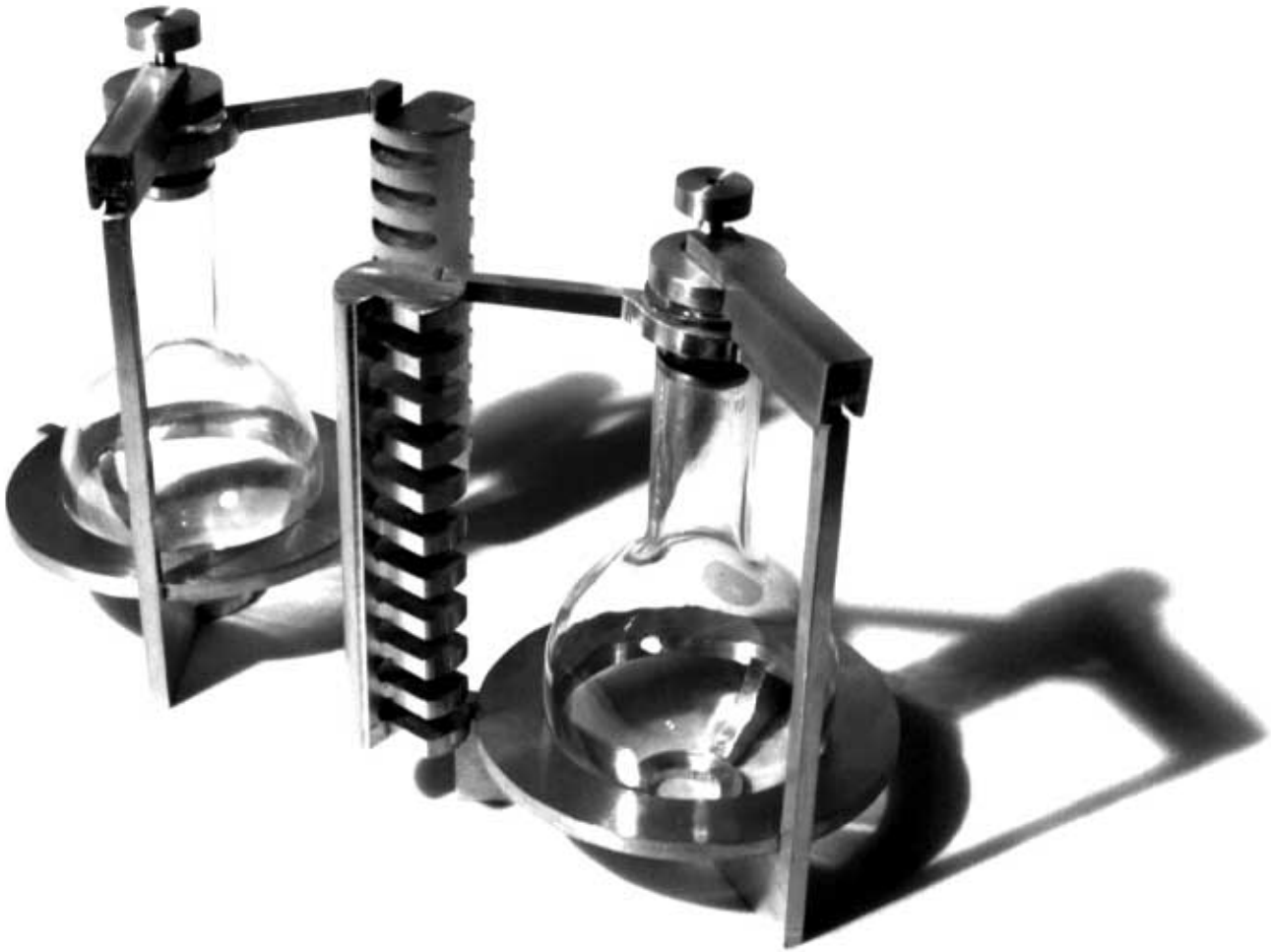
-Emilio Ambasz



details of second oil and vinegar cruets



close up and diagram of handle



The second oil and vinegar resulted as an evaluation of all previous work. Oil and vinegar cruets are often present as table objects when serving a salad. This design acknowledges the desire to be able to dispense equal amounts of the two liquids onto a salad at the same time. Joining the oil and vinegar cruets would facilitate being able to pour both liquids at once, justifying the continued use of interlocking. In the original oil and vinegar prototypes the vessels were too large to fit comfortably in the hand, especially when joined, precluding simultaneous pouring. Handles were added to the new vessels to allow for easy pouring. In these cruets interlocking occurs only where necessary, the handles, which are articulated so that they join to one another. When interlocked both vessels can be lifted and poured together. Disjoined, the handles allow each vessel to be poured independently. The cylindrical form of the handle fits comfortably in the hand both when joined and apart. The hand acts in opposition to the weight of the vessels forcing the interlocked handles together when pouring both cruets together. Material issues are dealt with in a similar manner as with the first cruets; aluminum is used to contact the hand and the table, glass is used to contain the liquid. The shape of the aluminum container results from the geometry of the shape of the glass flask. In the previous oil and vinegar an interesting geometry was made by the penetration of the aluminum rings with the glass, however the majority of the glass flask was covered and could not be enjoyed for it own sake. These new vessels celebrate the shape of the glass vessel by accentuating its geometries with the aluminum base that receives it. The geometry of the shape of the glass flask determines the form of the aluminum; it touches the flask where necessary as a result of stability or function. The tripodal base engages the handle, also made of aluminum, and supports the spout. The spouts are employed to diminish the distance between the mouths of the two vessels; by angling the spouts towards one another the liquids flow together. Consideration was also given to the ability to remove the glass for easy cleaning. This is accomplished by using a cap which when in place engages the glass vessel and the aluminum base, holding them together. When the cap is removed, the glass vessel can be tilted and removed for cleaning or refilling. The cap consists of the spout, an air release, a knob for easy removal, and a plug. It is constructed of aluminum with two rubber rings recessed into the plug section to act as seals. The plug fits into the neck of the flask while the spout fits over the base locking the glass vessel into position. The emphasis given aspects of function make the second oil and vinegar significantly more successful than the first.

TRANSITION

ergonomically sound-
good fit in hand, pours well, easy to join

pursue idea of using minimal area to interlock;
move away from objects in which entire form is a gesture of interlocking-
does the object still read as a pair

functional concepts successful-glass easy to remove and clean, spouts stabilizes glass on aluminum, flow of liquids merge when poured

meaning
how does the object fit into daily life

continue to explore *giving form* to *conceptual* ideas
such as physical joining of objects used as a pair

is there a less awkward method of joining spout to base?

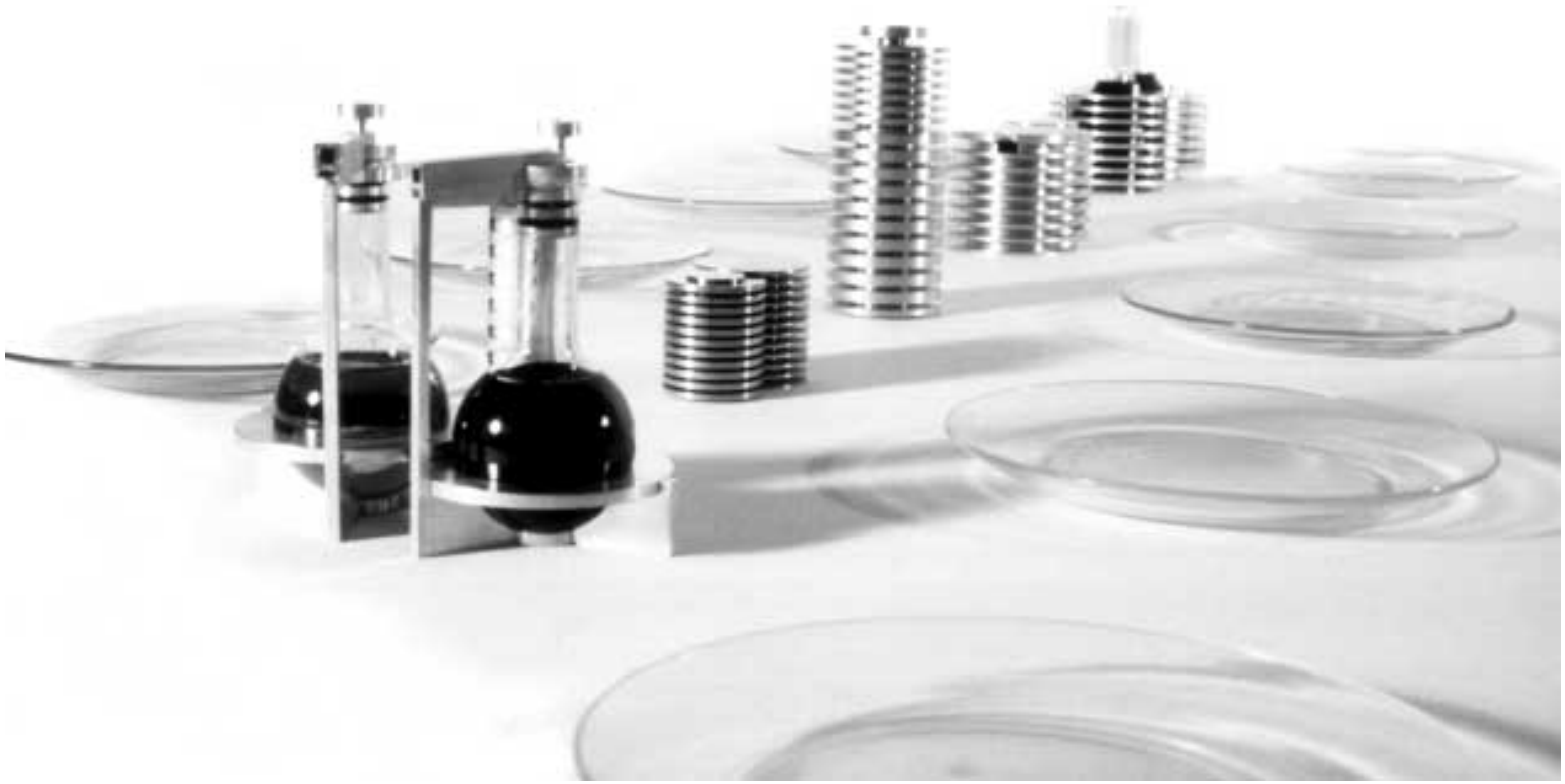
WHAT WORKS? material treatment -
glass housed in aluminum with no material bond

rethink syntax
do the shapes of the individual parts express their function?

is the material which is unnecessary to the function *essential* to the design?

reconsider design from standpoint of making

next!



VITA

Kimberly A. Peck 9303 Hamilton Dr., Fairfax, VA, 23031, 703·273·2511

Education

1993-1997 **Master of Architecture**
Virginia Polytechnic Institute and State University Blacksburg, VA

- Thesis-an investigation into the design and production of objects for the table such as salt and pepper shakers, cream and sugar vessels and oil and vinegar cruets.
- Study Abroad: June-August, 1994; February-September, 1995
  Studio and theory work in Italy, Spain, Switzerland, France, Germany, Austria, Czech Republic, Belgium and the Netherlands.
  Independent study in Sweden, Denmark, Norway, Finland, Greece, Turkey, Morocco, Portugal, Hungary, England, Ireland, and Scotland.

1988-1992 **Bachelor of Science**
Boston University Boston, MA

- Senior project consisted of modeling and analyzing the signals and systems in the neonatal intensive care unit at Children's Hospital, Boston, MA.

Work Experience

Graduate Assistant
Virginia Polytechnic Institute and State University Blacksburg, VA
1996 Metal fabrication from design drawings, primarily consumer products.

1994-1995 Teaching assistant for statics course.

Skills

Shop Experience:
Skilled in use of milling machine, lathe, and wood working equipment.
Worked extensively in aluminum, stainless and high carbon steel, copper, brass, bronze, wood, acrylic, and delrin.

Photography:
Working knowledge of 35mm and 4X5 format cameras, black and white development and printing.

Computer Experience:
Proficient in Autocad 13, Photoshop, Quark, Pagemaker, Illustrator, Ashlar Vellum, spread sheet and word processing programs, and internet software.

Languages:
Conversant in Spanish, knowledge of French and Italian.

Honors

1993-1997 Instructional Fee Scholarship, VPI & SU.
1990-1992 Dean's list, B. U.